

EMPETZ

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1 INTRODUCTION

EMPETZ is a mobile application designed for buying and selling pets, providing a seamless and trustworthy platform for pet lovers. In addition to its core marketplace feature, EMPETZ offers a wide range of services aimed at supporting pet owners in their daily responsibilities. The app includes a dedicated section for pet care, offering helpful tips and guidance on topics such as grooming, feeding, and training. To further assist users, EMPETZ integrates an intelligent chatbot that is available to answer questions related to pet health and behavior. Another key feature of the app is its health tracking system, which allows users to monitor their pets' medical history, keep track of vaccinations. By combining these features, EMPETZ not only facilitates the process of pet adoption and sales but also promotes responsible and informed pet ownership.

When system requirements are well-defined from the beginning, they provide a clear understanding of what the application is expected to do, guiding developers, designers, and stakeholders throughout the project. This clarity helps avoid confusion, reduces the chances of costly rework, and ensures that the final product meets user expectations and business goals. Defined requirements also serve as a benchmark for measuring progress and success during development. They allow for accurate planning, including budgeting, scheduling, and resource allocation, which in turn helps keep the project on track and within scope. Additionally, clearly specified requirements improve communication among team members, ensuring that everyone is aligned and working toward the same objectives. They are crucial for quality assurance, as testers rely on these requirements to validate whether the app performs as intended.

1.1 PURPOSE

The purpose of the **Software Requirements Specification (SRS)** document for the EMPETZ system is to provide a clear, detailed, and structured description of the application's functional and non-functional requirements. For EMPETZ, the SRS outlines the core features such as pet buying and selling, pet care content, health tracking, and chatbot integration. It also defines system behavior, performance expectations, security requirements, and user roles. By clearly stating these requirements, the SRS helps guide the development process, supports effective testing and validation, minimizes misunderstandings, and reduces the risk of project delays or scope changes. Ultimately, the SRS ensures that the final product aligns with the user needs and business objectives, serving as the foundation for successful design, implementation, and maintenance of the EMPETZ system.

This document serves as a comprehensive reference that defines what the system is expected to do (functional requirements), such as user registration, pet listings, chatbot support, and health tracking features, as well as how the system should perform (non-functional requirements), including performance, security, usability, and scalability. It helps guide the development process, ensures alignment with user and business needs, and serves as a basis for validation, testing, and future maintenance.

1.2 SCOPE

The scope of the EMPETZ system encompasses the design, development, and deployment of a mobile and web-based application that serves as a comprehensive platform for pet-related services. The primary goal of the system is to facilitate the buying and selling of pets while also offering supportive tools for pet care and health management.

EMPETZ allows users to register as buyers or sellers, create and manage pet listings with detailed information and images, and communicate securely through the platform. In addition to marketplace functionality, the system includes a pet care section offering educational resources, and a health tracking that enables users to record and monitor their pets' medical history, vaccinations, and vet appointments. The platform is further enhanced by a built-in AI chatbot, which provides instant answers to user queries related to pet health, behavior, and care.

user roles are;

BUYER: Buyers are users who browse the platform to find and purchase or adopt pets. They can search and filter pet listings, view detailed information and images, communicate with sellers, and manage their account and favorite listings.

SELLER: Sellers are users who list pets for sale or adoption. They can create, edit, and manage pet listings, including uploading photos and descriptions. Sellers can communicate with interested buyers.

1.3 OBJECTIVES

It provide a secure and user-friendly platform where individuals can list, browse, buy, or adopt pets easily and efficiently.It offer guidance on pet care, grooming, nutrition, and training to help users take better care of their pets.Incorporate health tracking features that allow users to manage and monitor their pets' medical history, vaccinations, and vet appointments.Integrate an AI-powered chatbot to answer user queries related to pet care, behavior, and health, for immediate assistance.Enable direct communication between buyers and sellers to negotiate, ask questions, and complete transactions within the app.

EMPETZ System is also have some problems that are ;

Many pet buyers and sellers rely on scattered or unreliable sources to find or list pets. EMPETZ aims to centralize the pet marketplace, providing a trusted and user-friendly platform where users can safely buy, sell, or adopt pets.Buyers often struggle to find accurate and complete details about pets before making a decision. EMPETZ addresses this by allowing sellers to upload detailed listings with verified information and images, promoting transparency.New or inexperienced pet owners may not have access to proper care guidelines. EMPETZ includes a dedicated section with reliable pet care tips and educational content to promote responsible ownership.

2. FUNCTIONAL REQUIREMENTS

2.1 Primary Actors of the EMPTEZ System:

Buyer:

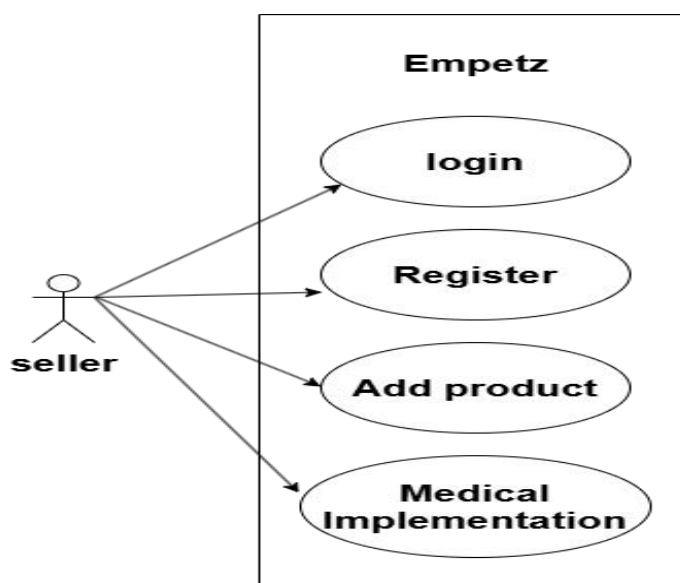
A user who browses pet listings with the intention to purchase or adopt a pet. The buyer interacts with the system to search, filter, view listings, contact sellers, and access pet care and health tracking features.

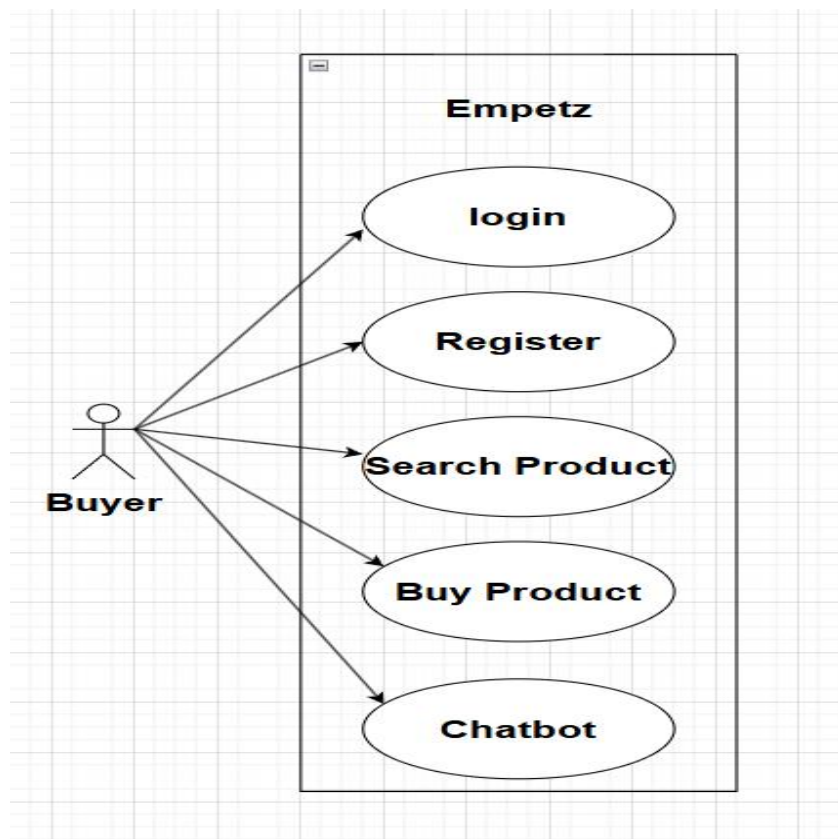
Seller:

A user who lists pets for sale or adoption. The seller interacts with the system to create, manage, and update pet listings, communicate with potential buyers, and manage their seller profile and transaction history.

2.2 USE CASE DIAGRAM

A Use Case Diagram is a visual representation used in software engineering to show how users (actors) interact with a system and what functionalities (use cases) the system provides. It is a key part of Unified Modeling Language (UML) and is commonly used during the requirements analysis phase of software development.





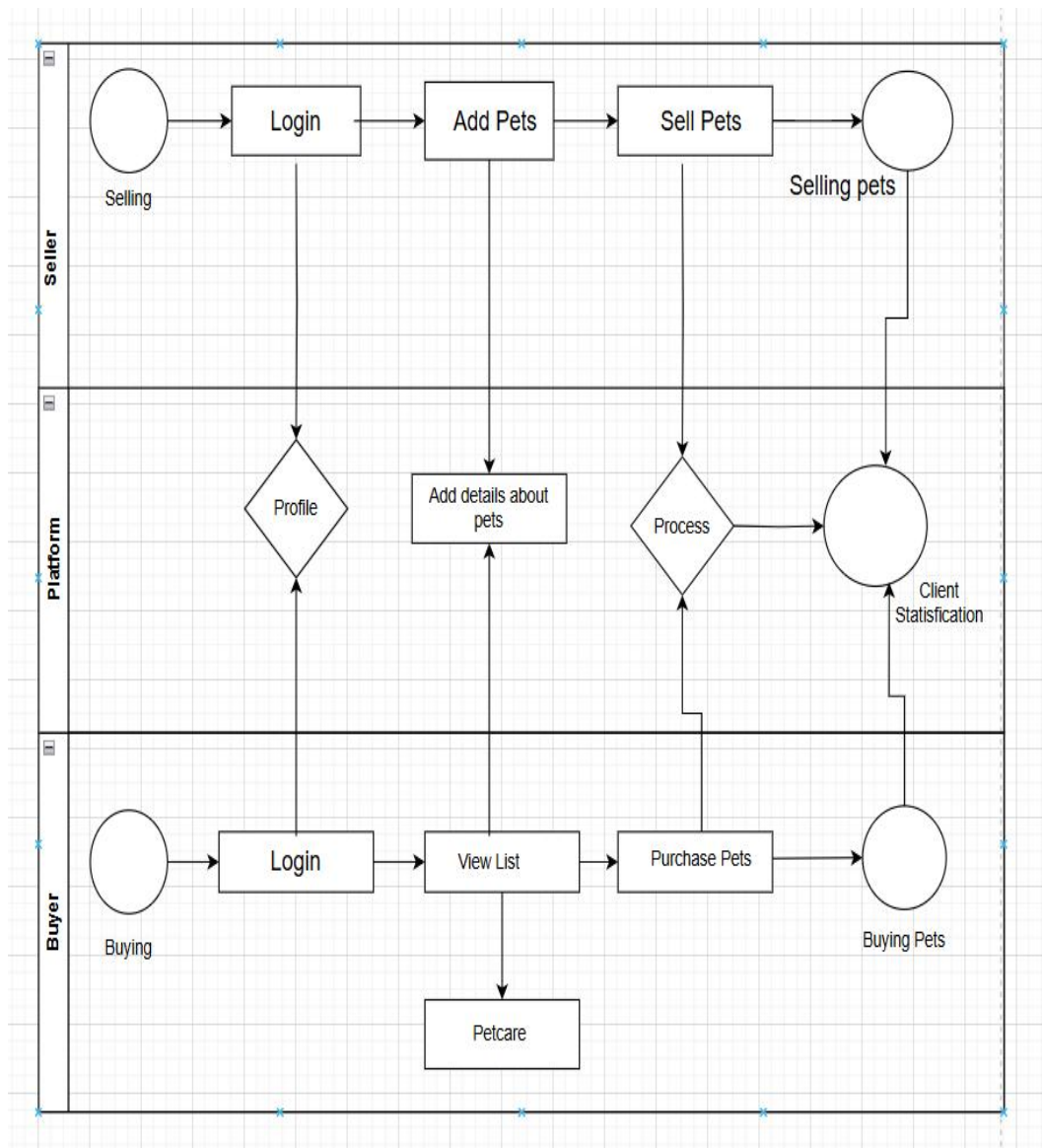
2.3 USER STORIES

User stories are short, simple descriptions of a feature told from the perspective of the end user. They are commonly used in Agile software development to capture a system's functional requirements in a way that focuses on user needs and value rather than technical details. It clearly defines what users need the system to do. It helps developers and stakeholders understand the user's perspective. Break down the system into manageable, testable features. It guides the development, testing, and design process. User stories are informal, natural language descriptions of one or more aspects of a software system, written from the perspective of an end user. Unlike detailed technical specifications, user stories are meant to be brief and easy to understand, even by non-technical stakeholders.

As a	I NEED TO	SO THAT I CAN
Buyer	Login with email and password or mobile number	Enter to the application
Buyer	Register with their details	Know the details about the buyer
Buyer	Search pets	Search pets through this application
Buyer	Buy pets	Buy pets through application
Seller	Login with phone	Enter the application and manage my products
Seller	Register the application	I can access the features and services of that application
Seller	Add pets	List them for sale on the platform

2.4 BUSINESS PROCESS DIAGRAM

BPDs are commonly used in Business Process Modeling and often follow BPMN (Business Process Model and Notation) standards to ensure clarity and consistency. A Business Process Diagram (BPD) is a visual representation that outlines the workflow or business process of a system or organization. It shows how various activities, decisions, and interactions are structured to achieve a specific business goal. The main goal of a BPD is visually map out how a process starts, progresses, and ends. Identify the sequence of tasks and responsibilities. Improve understanding, efficiency, and automation



3. NON FUNCTIONAL REQUIREMENTS

Reliability Requirements

- The system should have **99.5% uptime** annually.
- All data entered by users (e.g., listings, health records) must be saved reliably, with backup performed daily.

Scalability Requirements

- The system must be designed to scale horizontally, so it can handle increased user loads (buyers, sellers, admins) without performance loss.

Security Requirements

- All user data must be transmitted over HTTPS.
- User passwords must be stored using strong encryption.
- Access control must be implemented to prevent unauthorized access (e.g., buyers cannot access seller admin functions).

Usability Requirements

- The app should have a simple and intuitive user interface.
- New users should be able to register

Maintainability Requirements

- The system codebase should follow standard coding practices to allow easy updates and debugging
- New features should be deployable with minimal downtime using CI/CD pipelines.

Portability Requirements

- The application should run on major mobile platforms.
- A web version should be accessible via modern browsers

4. TECHNICAL REQUIREMENTS

Software Requirements

Operating System: Windows 11 Home Single Language .

➤ Development Tools:

- Flutter SDK (for mobile application development) for front end
- Visual Studio with ASP.NET support (for back end development)
- Android Studio (for emulator and testing)
- Database: Microsoft SQL Server (or compatible relational database)

Hardware Requirements (Development Environment)

- Device Name : DESKTOP-P63FL0J HP
- Processor : Intel(R) Core(TM) i3-8130U
- Installed RAM : 8.00 GB
- System Type : 64-bit operating system, x64-based processor

5.CONCLUSION

The EMPETZ system is designed to be a comprehensive and user-friendly platform for buying, selling, and caring for pets. By integrating features such as pet listings, a smart chatbot, and pet health tracking, the app aims to create a trusted and engaging experience for both buyers and sellers.

Through clearly defined functional and non-functional requirements, EMPETZ ensures not only that essential features are implemented effectively, but also that the system performs reliably, securely, and efficiently. The inclusion of user roles, use cases, business process diagrams, and user stories helps guide the development team and stakeholders in building a system that meets real-world needs.

In conclusion, EMPETZ has the potential to become a go-to platform for pet lovers, offering convenience, education, and peace of mind—all in one application. With thoughtful planning and execution, it can significantly enhance the way people connect with and care for animals.